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Summary

The Rabia Balkhi Hospital, in downtown Kabul, has a greatly improved capacity to offer specialty services to its patients, including obstetrics and gynecology, neonatal care, internal medicine and general surgery. These new services, coupled with relatively safe travel, have increased the number of patients seen at Rabia Balkhi Hospital.

The number of normal and assisted deliveries increased by 22% from February to May. The proportion of the Rabia Balkhi Hospital (RBH) patients from the remote parts of Kabul city with few clinics within reach, continued to be significantly high. Pregnant women with no antenatal care and multiple high risk factors were seen frequently. Often, these mothers had neglected their conditions over long periods of time and arrived in moribund conditions.

The rehabilitation of three buildings, A, B and C, is complete. Patient care areas are inside building A. Building B contains IMC classrooms and offices, as well as laboratory, pharmacy, and radiology departments on the first floor. There is also a Computer lab and Skills lab on the first floor and a library and RBH conference room on the second floor. English classes are held in Building C. In addition, IMC staff members, in collaboration with the hospital director, the CURE International consultant and CDC representatives are working on allocating new spaces for OB/GYN patient care and expanding training activities.

The monthly Quality Assurance Coordination meeting between the RBH director, and heads of wards was reinforced this quarter. The Quality Assurance Committee was created, which consists of an IMC program manager, a CDC coordinator, the CURE International consultant, the hospital director and two of her nominees who are responsible for supervising three teams each. Each group will supervise the implementation of RBH standards and procedures. The CDC team coordinates the Quality Assurance Committee.

His Excellency, the Minister of Public Health, visited Rabia Balkhi Hospital to officially take over the renovated hospital facilities from DoD. He was given a short tour of the hospital and conducted opening ceremonies for the Bacteriology department, which was set up by IMC, and the Endoscopy department, for which equipment was donated by JICA.



Bacteriology Department of RBH (IMC RBTP Lab Trainer giving on the job training to RBH two female Lab staff)

Major Achievements

1. IMC took an inventory of all the books in the library, developed policies for the lending and reference library and ordered books in the relevant medical fields especially in Obstetrics and Gynecology. The MoPH librarian is doing an excellent job in being accountable for the books and in ensuring their safe keeping. IMC has also obtained (Integrated Management of Pregnancy and Childbirth) IMPAC books published by the WHO both in Dari and English, along with Standards developed by Afghan MoPH, for distribution to all residents, attending doctors, midwives and IMC trainers.
2. Practices in the neonatal nursery have been improved, leading to a better quality of care. There is consistent survival in infants with reasonable birth weights and APGAR scores, while improvements in survival for high-risk neonates are being developed.

3. The Skills lab, Computer lab, and conference rooms have been remodeled in order to facilitate training activities. Workstations are now available for IMC expatriate and local training staff. Air conditioners and UPS units have been installed to maintain the computer lab, and improve the overall working environment.
4. IMC improved the standard of all Allied Health professionals. A curriculum was also established for English and Computer training for the RBH medical staff.
5. IMC developed a training database, which captures all the training activities done at RBH by name of trainer and trainee, and subject, as well as skills taught. The database is updated on a daily basis.
6. The training of trainers' team was strengthened by the promotion and addition of staff. These changes have had a positive impact on staff morale, and have improved efficiency and output markedly.
7. IMC has established good rapport with the Institute of Higher Studies (IHS) and has obtained all the training materials necessary for certifying uncertified midwives. IMC has prepared copies of all these materials and training of midwives has started in full force.
8. A friendly atmosphere and teamwork approach has been established between IMC and RBH medical staff, which has resulted in better communication, cooperation and collaboration.
9. Protocols were developed in conjunction with RBH medical personnel, on the use of Misoprostol, Magnesium sulfate, and Oxytocin for the induction or augmentation of labor. Protocols were also developed for the management of pulmonary hypertension, premature rupture of membranes (PROM), and neonatal resuscitation. Lastly, protocols were made on preventing post-cesarean endometritis, hypovolemic shock, and APGAR scoring.
10. IMC maintained the emergency cabinet in the Operation Theater, which was previously established. In addition, IMC prepared anesthesia kits with essential drugs and equipment needed for each anesthetist. Not only has this discontinued delays in administering anesthesia, it has also created accountability for the drugs and equipment used.
11. IMC Pharmacists have established a system of inventory and bookkeeping for medications in the RBH pharmacy. IMC has inventoried equipments and commodities in use in RBH as well as in the warehouse, and are brought to RBH gradually as needed. IMC pharmacists are currently developing a database for pharmacy and other hospital equipment.

Program Overview

The total number of deliveries conducted at Rabia Balkhi Hospital increased from February to May. During the first month (February 15 to March 15), there were 989 deliveries. This number increased to 1272 in the second month (March 16 to April 15). The number of deliveries in the third month (April 16 to May 15) remained consistent with the second month, at 1271 patients. The number of deliveries from November 2005 to mid May 2006 is depicted in figure 1. The hospital recorded marginally decreased numbers of maternal deaths and neonatal deaths during the reporting quarter as compared with the last quarter. Although maternal and neonatal deaths increased slightly during the second quarter, this is

attributable to the increase in the number of patients seeking care at RBH (figures 2 and 3). There were no maternal deaths recorded for the period of 12/15 to 1/15.

The high risk cases without the WHO recommended four antenatal visits or referral that presented at RBH Hospital remained high. The IMC/RBH team, in coordination with CDC, analyzed the data and shared it with the relevant staff. Moreover, the IMC expatriate and local trainers conducted a needs-based on-the-job training for RBH OB/GYN doctors in the form of morning reports and hospital rounds to improve the quality of patient care in the hospital.

Figure1: Number of Deliveries at RBH from November 2005 to April 2006

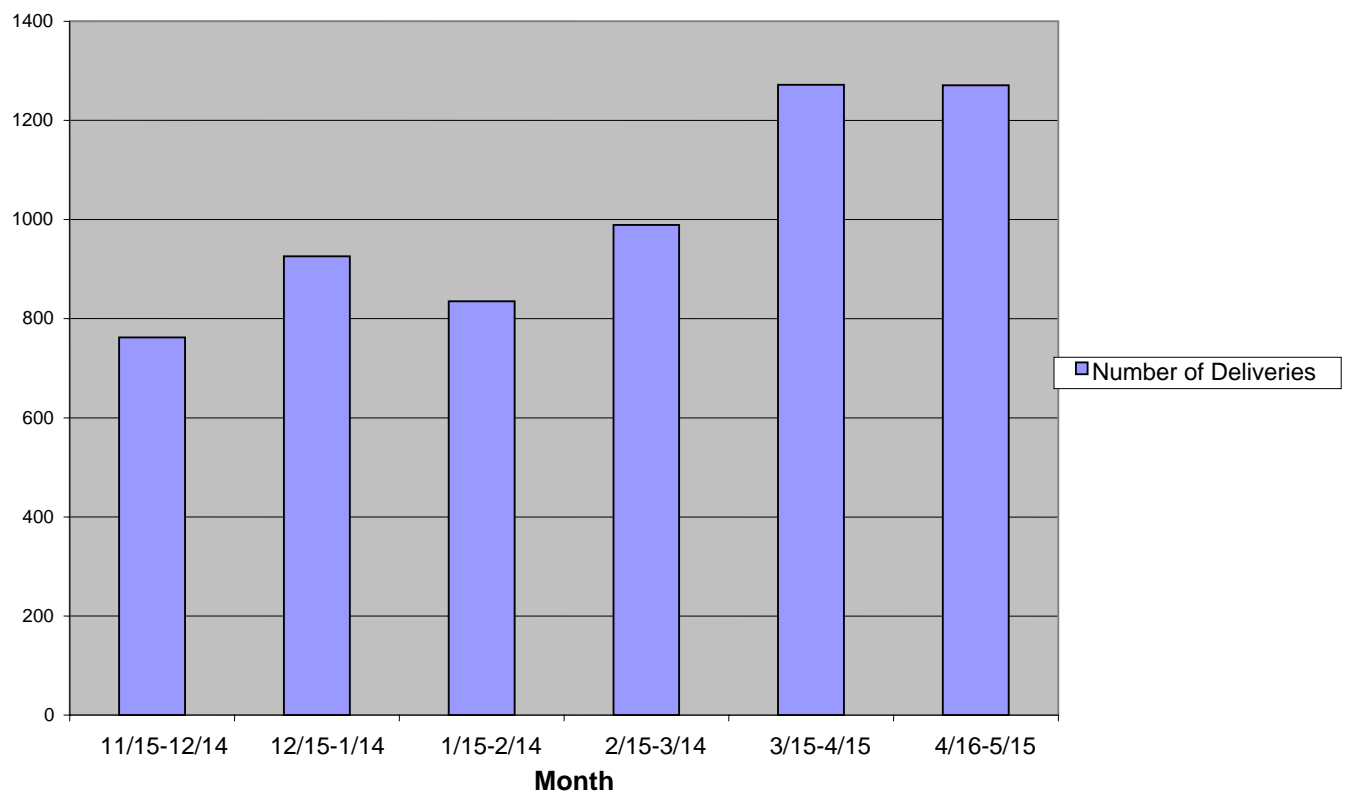


Figure 2: Number of Maternal Deaths at RBH from November 2005 to April 2006

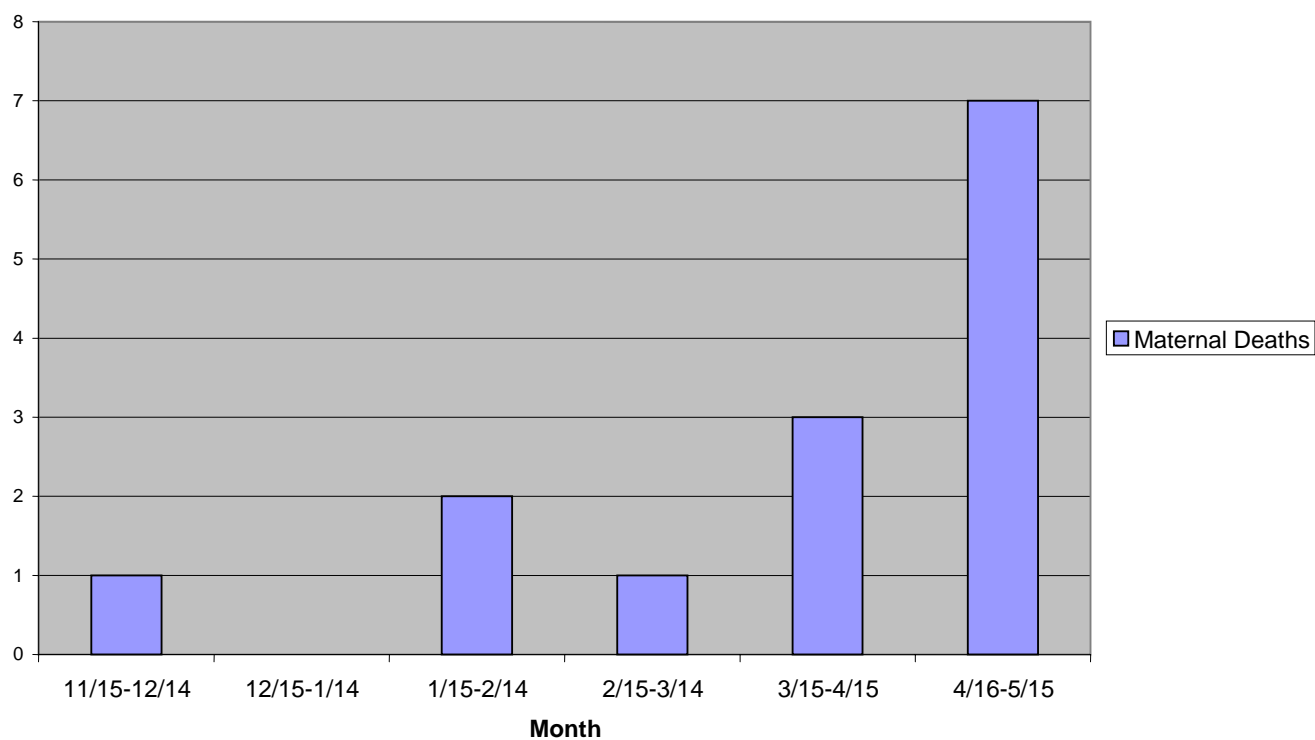
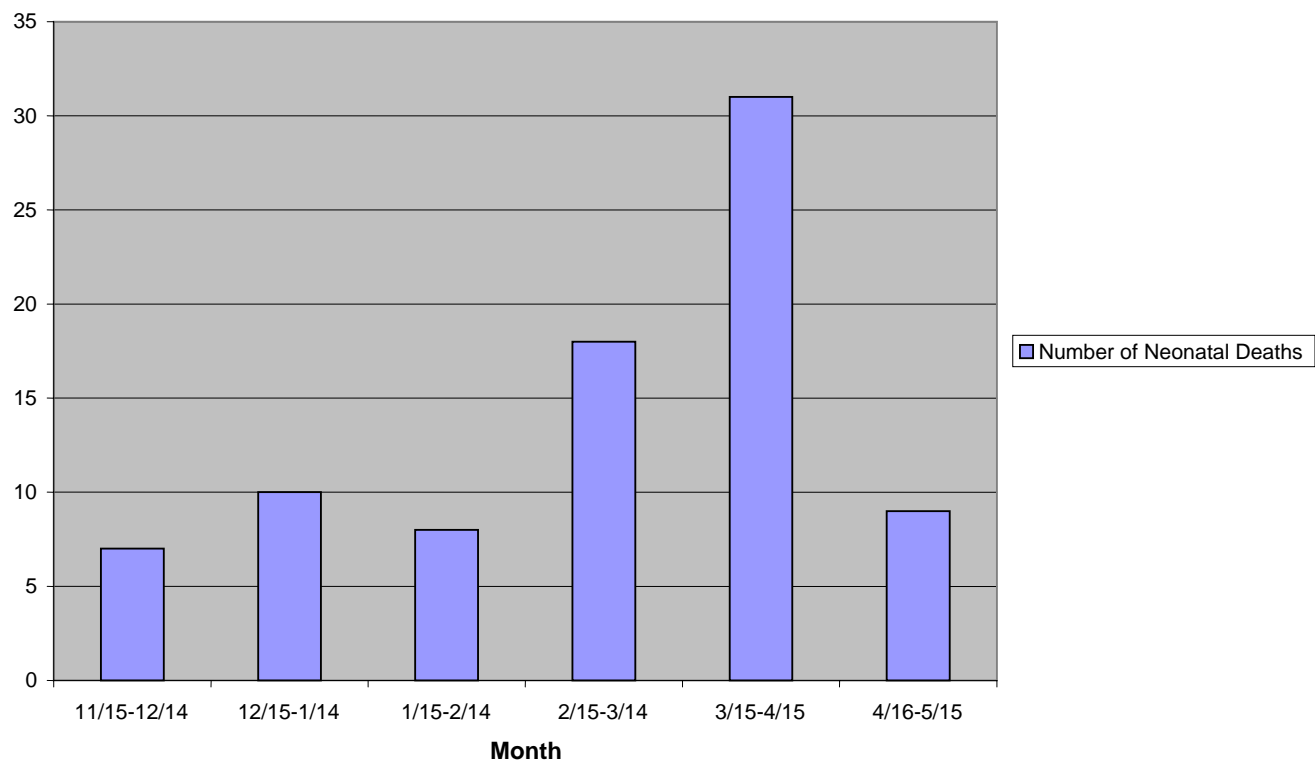
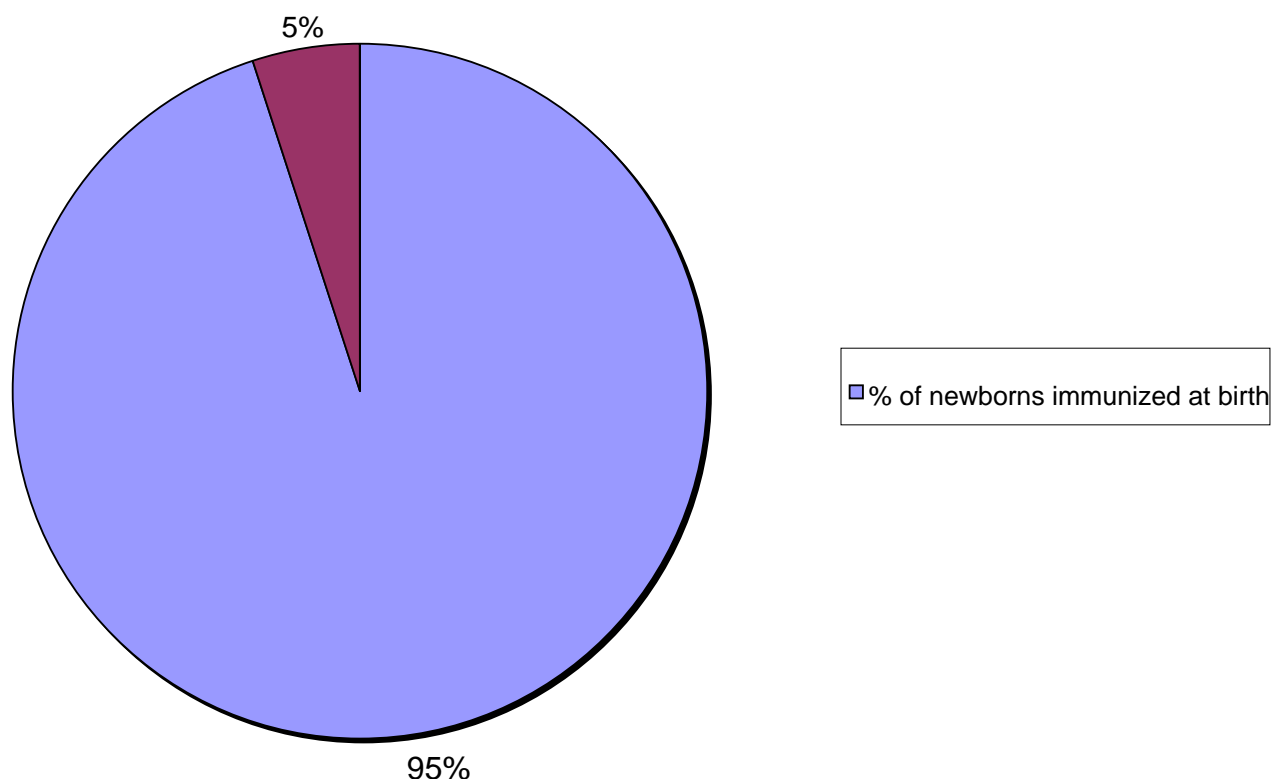


Figure 3: Number of Neonatal Deaths at RBH from November 2005 to April 2006



In addition, 3345 out of 3532 (95%) newborns were immunized with BCG and OPV, which follows WHO's Expanded Program of Immunization (EPI) (figure 4). These results indicate the strength of the training in regards to the importance of immunizing, as well as the importance of stocking these vaccines and having them available at all times.

Figure 4: Percent of Newborns Immunized at Birth



Profile of the target population and beneficiaries

The primary beneficiaries of this project are the 14 attending physicians, the 68 residents, and the 85 nurse-midwives in training at Rabia Balkhi Hospital. Secondary beneficiaries include internal medicine physicians at RBH, administrators, and allied health workers, including pharmacists, lab technicians, and hospital support staff. The ultimate beneficiaries are the approximately 15,000 women and children who are patients in the MCH Unit of Rabia Balkhi Hospital each year.

Program Goal, Objectives, Activities

The goal of the project is to improve the quality of care offered at Rabia Balkhi Hospital in order to decrease maternal and neonatal mortality rates, and to support the establishment of a sustainable OB/GYN residency-training program in Kabul.

Objective:

To design and provide Refresher Training and Continuing Education Programs for physicians, nurses, midwives and other medical professionals at RBH.

Activities:

1) Assess RBH Human Resources—

IMC is in the process of subcontracting Tulane University to assess the skills of RBH attending and resident Ob/GYNs, midwives and allied health professionals, and to strengthen the training provided to them through IMC's program.

2) Curriculum Development

- ***Revise Residency Curriculum***

IMC tried repeatedly to secure MoPH approval of its Obstetrics and Gynecology training curriculum. DHHS contributed to this effort. The authorities advised that they were still reviewing the curriculum. IMC will continue to coordinate with the MoPH to obtain approval of a suitable training program. In addition, IMC continues to train all essential personnel at RBH.

The IMC expatriate OB/GYN consultants, Dr. Naseem Rashid and Dr. Mary Jo O'Sullivan, and IMC local OB/GYN specialists provided technical support to RBH OB/GYN doctors regularly. Dr. Naseem Rashid supervised the operation theater and recommended further improvements. Extensive changes were implemented in the Operation Theater to promote infection prevention and ensure cleanliness; Dr. O'Sullivan supervised the delivery room and recommend further improvements.

3) Implement Training Programs

- ***Implement revised training programs for doctors, nurses and midwives, anesthesia technicians, pharmacists and other hospital staff***

All curriculum development is coordinated with the MoPH. All trainings, lectures, and presentations were done by local and expatriate staff and are listed in full in appendix A. Training activities also focused on techniques to improve clinical skills and included all RBH staff. Health education was also integrated into the training, and concentrated on counseling mothers about breastfeeding and its advantages, birth spacing, neonatal care, immunizations, and hygiene. This is especially important as the information found during counseling can prevent delays in seeking care, infection and other morbidities, and ultimately, mortality in the mother and the newborn.

IMC continued to provide English and computer classes for attending doctors, resident doctors, midwives/nurses, IMC staff, RBH admin staff, and other RBH allied health workers. Computer classes are regularly attended by RBH and IMC staff and reached 93 participants. English language classes reached 132 participants from February to April. These numbers of participants, which continues to grow, shows the willingness of the staff to learn new subjects and improve care.

The training database contains information regarding past trainings, and is regularly updated and analyzed.

A schedule of residency trainings was developed for Ob/GYN trainers and attending doctors.

4) Recruit and assign Consultants

Although there was a shortage of expatriate staff in the second quarter, promotions and recruitment of staff has brought an OB/GYN physician, a pediatrician, and an additional midwife trainer to the site. All are highly qualified and have begun providing training in their respective fields.

5) Provide Logistical Support

- *Collect feedback from consultants on logistical support and communicate to IMC departments, and make adjustments where necessary.*

IMC continued to give logistical support to CDC consultants satisfactorily. A new rental vehicle was hired, to enable national staff to assist in logistical support. IMC continued to provide supplies for infection prevention like soap, detergent powder, liquid bleach, dishwashing liquid, flies spray, brushes, utility gloves, cleaning cloth and brooms at the request of the nursing director.

6) Assess RBH Equipment

- *Evaluate equipment needs relative to expansion of training programs and prioritize procurement to support programs.*

IMC evaluated the equipment and medicines needed for the emergency and elective OB/GYN cases in order to facilitate practical training sessions for RBH and IMC OB/GYN doctors and allied health personnel. The request forms for medical items were made in consultation with RBH and IMC medical staff as well as RBH director and IMC consultants.

7) Procurement:

All items procured for RBH are listed in appendix B.

8) Challenges

One of the biggest challenges for IMC at RBH is limited ability to supervise the RBH staff, due to the resistance of the RBH director to delegate such authority to IMC. The reluctance of many RBH staff members to assume individual responsibility for maintaining standards of care and professional practices continued to be an obstacle to improving patient care to the desired levels. This attitude has been addressed with RBH staff members, and the Hospital Director, throughout the project. IMC along with the partners is providing her continuous guidance and support, to help her to take control of the hospital and to change her attitudes, which may impede progress.

9) Plans

IMC is finalizing a clear MOU with the MoPH, to clarify our role as trainers. The cooperation and collaboration with the partners are also being strengthened. IMC personnel are being provided with training materials and their knowledge and training skills are being constantly updated. IMC and RBH staff are cooperating closely on training. IMC and RBH morning reports will soon be merged with strategies to use this time for professional learning. Negotiations with MoPH are on to get more authority and recognition as primary trainers. IMC clinical staff will spend almost all their time in hospital wards supervising patient care and doing didactic training simultaneously, which will surely improve patient care. It is expected that a team from Tulane University will deploy to Kabul during the coming quarter, to gather critical information that will enable them to develop a plan for a skills assessment at RBH, improvement of existing training curricula, and strengthened training approaches.

Appendix A:

Expatriates staff lectures, presentations and Trainings:

A. Dr. O' Sullivan (IMC Ob/Gyn Trainer)

- Physician Assessment exam (120 questions) completed
- Bedside teaching
- Lectured Ob/Gyn doctors on the following topics:
 - Small group practical work daily regarding Vacuum Extraction for four days
 - Universal Precautions
 - Vacuum extraction
 - Brucellosis
 - Toxoplasmosis
 - Cytomegalovirus
 - Antenatal fetal testing
 - Intrapartum fetal Monitoring
 - Listeriosis
 - Bleeding in early pregnancy
 - Bleeding in late pregnancy
 - Preterm Labor/PROM
 - PPH and third trimester emergencies
 - Uterine, utero-ovarian, infundibulopelvic and hypo gastric artery legation
 - DUB
 - Medical Complications of Pregnancy
 - To IMC physicians only Pudendal block
 - Lecture and practical work regarding mechanisms of labor and Pelvimetry including demonstration using bony pelvis and neonate model for midwives
- Completed Vacuum extraction practical with participating residents
- Set up demonstration instruments to teach IMC physicians and some residents the pudendal block

B. Naseem Rashid (IMC Ob/Gyn Trainer)

Gave lectures on:

- Post partum Hemorrhage for Ob/Gyn doctors and midwives
- Partograph for midwives in three sessions

C. Connie Day (IMC Midwife Trainer):

- Taught a lecture regarding Bladder Catheterization + demonstrated proper technique for midwives.
- A professional development conference attended by RBH midwives and Connie Day
- Lecture and practical work regarding mechanisms of labor and Pelvimetry including demonstration using bony pelvis and neonate model for midwives
- Provided training on bleeding in early pregnancy to RBH midwives. Five groups, totaling 85 midwives, were trained.
- Conducted a session regarding rapid initial assessment for midwives.
- Performed a skills evaluation.

- Gave a lecture regarding infection prevention for head midwives and other midwives.
- Gave a skills demonstration + check off for: collecting blood samples and IV start to 56 midwives.
- Skills lab on: IV start, collection blood samples, bladder Catheterization for midwives
- Facilitated a three-day Neonatal Resuscitation training workshop for doctors and midwives.

Local staff lectures, presentations and Trainings:

A. Ob/Gyns:

- A presentation regarding homeostasis and coagulation was given to RBH Ob/Gyn doctors by Ob Gyn attending physician, Dr. Aweed
- A presentation on cephalopelvic disproportion given by Dr. Latifa Ob/Gyn Consultant of IMC.
- A presentation on dystocia given by Dr. Sara Anwari RBH Ob/Gyn trainer
- A presentation on drug categories in pregnancy given by IMC pharmacist trainer to RBH Ob/Gyn doctors.
- A presentation on blood and its components given by IMC Lab Trainer to RBH doctors
- A presentation on surgical sterilization given by IMC Ob/Gyn consultant Dr. Sadiqa to RBH doctors
- A three day refresher training workshop (three times) on Neonatal resuscitation for RBH Ob/Gyn and pediatric doctors given by IMC and RBH Trainers

B. The following topics were taught by IMC Pediatrics consultants and RBH trainers:

- A three-day neonatal resuscitation training (2 hour/day) in 3 rounds completed for Ob/Gyn and pediatric doctors.
- A presentation regarding nutrition was given to 24 Ob/Gyn doctors of the RBH.
- A presentation regarding congenital malformation was given to Ob/Gyn doctors of the RBH.
- A presentation on Low birth weight and small for gestational age given by RBH pediatrician to RBH Ob/Gyn and pediatric doctors

The following topics were covered for on the job training:

- Infection prevention and control
- Management of 2nd and 3rd stage of labor
- Pelvic diameters
- Episiotomy repairing
- Filling partograph
- 1st minute and 5th minute Apgar scoring
- Taking care for pre-eclampsia and eclampsia
- Demonstration of placenta delivery to doctor and midwives
- Care during bulge amniotic membrane
- Management of 2nd stage of labor
- Repairing cesarean section, incision
- Vital signs
- Drug administration + APGAR score, some drug dosages for some midwives

- Apgar score, resuscitation and algorithm for doctors and midwives
- Congenital simple strider was given for pediatric doctors of RBH.
- Radiology and X-ray for X-ray technicians
- Lab related issues
- Drug categories during pregnancy
- Stock arrangement
- Hemoglobin
- Peripheral blood smear
- Digital lab machine
- Radio protection and radiation hazards, hysterosalpingography.
- Practical diagnosis from radiography in wards is done
- ABO & Rh incompatibility
- APGAR score
- Giving lab exam
- Fetal heart sounds in second stage of labor, during contraction, between and after it.
- Insertion NGT, vaccination, hypoxia
- Sever pre eclampsia
- Abruptio placenta
- DIC
- Contra indication of HSG
- Drug dosage in neonates, algorithm, resuscitation, drug administration + NGT
- Management of 1st and 3rd stages of labor
- Management of twin pregnancy and delivery
- Method of placenta delivery
- General information on pharmacology
- Malaria parasites
- Bacteriology
- Hematology
- Urine and parasitology
- Breech Presentation
- Leopold manure
- Misoprostol usage during first, second trimester
- Bethamethazon usage
- Induction and Augmentation
- Indications for Cesarean Section
- New natal injuries
- Lab Exam for 5 doctors and four midwives
- Eclampsia, and the grades of eclamsia and pre-eclampsia for Ob/Gyn doctors
- Usage of Magnesium Sulfate for midwives.
- Antepartum hemorrhage Management for doctors and midwives
- Sterilization of equipments
- Cesarean section for doctors
- Bishops score and usage of oxytocin for induction and augmentation of labour.

C. The following topics were taught by the IMC pharmacist trainer to RBH pharmacy technicians:

- **On the job training on:**
 - Stock arrangement
 - Drug categories during pregnancy
 - Use of ACE inhibitors, acetaminophen and acyclovir in pregnancy
 -
- **Lectures** (one hour/day) regarding pharmacology and storage condition of the following drugs for pharmacy staff
 - Amoxicillin
 - Penicillin
 - Ampicillin
 - Cloxacillin
 - Phenoxymethyl penicillin
 - Penicillin procaine
 - Benzathin Benzyl penicillin
 - Penicillin G penicillin
 - Co-amoxiclav (augmentin)
 - Cephalosporins (Cephadrin, Ceforoxin, Ceftriaxone)
 - Tetracyclines (Oxy tetracycline, Tetracycline, Doxycycline)
 - Aminoglycosides (Gentamicin, Streptomycin)
 - Macrolides (Erythromycin)
 - Sulphonamides (Co-trimoxazol)
 - Quinolones (ciprofloxacin, ofloxacin and nalidixic acid)

D. Anesthesia Training

The IMC Anesthetist Trainer developed a needs-based curriculum and has been conducting anesthesia theoretical and practical sessions for 11 RBH anesthetists periodically, for over a year now. IMC also provided anesthesia drugs for their practical session on emergency OB/GYN patients (C-Section, Hysterectomy, and other emergency Ob/Gyn surgery) the following topics were taught during this reporting period:

- Hypoxia and its related topics
- Indications of oxygenotherapy
- Methods of oxygenotherapy such as by catheter, Mask, portable oxygen cylinder, oxygen therapy in new born babies
- Usage of oxygenotherapy with high pressure.
- Usage of hyperbaric oxygen.
- Side effects of pure oxygen.
- Oxygenotherapy therapy in newborn babies
- Fluid and its definition
- Body Fluid (Physiology and clinical disturbances of water and Na, atomic weight and molarities)
- Body fluid (respiratory alkalosis and acidosis)
- Fluid therapy and its types

- Practical work in OT
- Spinal anesthesia(practical work

E. Radiologist trainer activities:

The radiologist trainer delivered:

- A five day training workshop on radiology for RBH Ob/Gyn doctors
- On the job training on different X-ray related issues for RBH X-ray technicians continuously.

F. Lab training activities:

The laboratory trainer provided on-the-job training on:

- Usage of lab equipment
- Different lab exams such as bacteriology, hematology, urine and parasitology
- Blood film
- A presentation regarding blood cells and hemoglobin was given to 18 attending and resident doctors of RBH.
- General lab tests for 8 lab technicians
- Culture
- Hematology
- General Urinalysis
- Gram staining and preparation of reagents for 4 Lab Technicians.
- Culture of vaginal discharge for 4 Lab Technicians.
- Antibigram and antibiotics for 4 Lab Technicians.

Taught lectures:

- Hemoglobin
- Thrombocytes and their functions for 7 Lab Tech
- Blood cells functions
- Making culture media
- Gram staining techniques for 4 Lab Tech.
- Peripheral blood smear
- Digital lab machine
- Hematological tests
- Biochemical tests
- Intestinal parasites and hemoparasites
- Urinalysis
- Serological tests
- Bacteriological tests especially direct smear and staining
- Malaria parasites
- A Lecture on Cells technical counting
- A Demonstration on abdominal fluid for cells differentiation
- A Lecture on coagulation time bleeding time

Appendix B:

The following are some of the major procurements to improve the IMC RBTP training center and to improve quality of care in RBH:

- Anesthesia kits with all essential drugs and important equipment
- Purchasing of 35 item Lab Reagents
- Books for Obstetrics and Gynecology and Midwife training
- Requested 2pc Ventilators for Anesthesia Machine
- Computer tables, Desk top and Lab top Computers, UPS and stabilizers
- Meeting table for 2 offices with chairs
- Carpets for IMC training offices and class room
- Shelves for TV and VCR for RBH health education
- Carpet for IMC office and training center
- Air Conditioner for IMC office
- TV (color 14 inch) for health education 1 pc
- Video + DVD player for health education of RBH
- Metal roof for male training area